## **CLAIMS**

What is claimed is:

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In a communications network having a plurality of users competing for network resources, a method for allocating the network resources comprising the steps of:

determining a set of distribution parameter associated with each of said plurality of users; '' | 100 | 100 |

transmitting, from each of said plurality of users to a network resource manager, a request for network access and an estimated set of distribution parameters associated with a particular one of said plurality of users;

predicting whether sufficient network resources exist to accommodate said request based on a plurality of said estimated set of distribution parameters; and allocating the network resources in accordance with said prediction.

- 2. The method of claim 1, further comprising transmitting, from said network resource manager to said plurality of users, information indicative of the allocation of the network resources.
- 3. The method of claim 1, wherein said step of allocating network resources comprises allocating network resources in a cellular telephone network, and further wherein said plurality of users comprise a corresponding plurality of cellular telephones.
- 4. The method of claim 1, further comprising providing a preemption process to allow a high-priority user to preempt service from a low-priority user.